

CLAIMS

1. An non-symmetric drive type piezoelectric ceramic transformer comprised of a rectangular piezoelectric conductor, characterized in that said rectangular piezoelectric conductor is divided into three zones along its length: the first zone, called as oscillation node adjustment zone, the length of which is adjustable, so as to adjust the resonance frequency and oscillation node of said piezoelectric transformer; the second zone, called as input drive zone, the upper and lower surface of which is coated with electrode respectively, and which is polarized along its thickness; the third zone, called as output generation zone, the output head of which is coated with electrode and which is polarized along its length .
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- 10 2. The non-symmetric drive type piezoelectric ceramic transformer according to claim 1, characterized in that there are three alternative oscillation modes, i.e. , $\lambda/2$, λ , $3\lambda/2$, of which oscillation mode $\lambda/2$ has preferred output power and boosting ratio, when operating under oscillation mode $\lambda/2$, the null displacement oscillation nodes are located at the center of the transformer, the oscillating displacement of output head is greater than that of input head, and
15 the oscillating displacement diagram belongs to an non-symmetric type diagram.
3. The non-symmetric drive type piezoelectric ceramic transformer according to claim 1, characterized in that said piezoelectric conductor is of single-layer.
4. The non-symmetric drive type piezoelectric ceramic transformer according to claim 1, characterless in that said piezoelectric conductor is composed of several simple-layer
20 piezoelectric conductor which are added together and passing through monolithic process so as to form a multi-layer transformer.
5. The non-symmetric drive type piezoelectric ceramic transformer according to claims 3 or 4, characterized in that the polarization direction of said input drive zone is from top to bottom or from bottom to top.
- 25 6. The non-symmetric drive type piezoelectric ceramic transformer according to claims 3,4 or 5, characterized in that the polarization direction of said output generation zone is right or left along its length .